UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL ELECTRIFICATION ADMINISTRATION
WASHINGTON 25, D. C.

January 28, 1952

TELEPHONE ENGINEERING MEMORANDUM 511

SUBJECT: Approval of Plans and Specifications for Telephone Construction

Telephone Engineering Memorandum 517 outlines the method to be followed by the borrower's engineer in preparing plans and specifications for telephone construction. The plans and specifications must be approved by the borrower before being submitted to REA for approval. Experience has shown that approval of plans and specifications can be expedited and postponement of bid dates avoided if the plans and specifications are accurate and complete. It is the responsibility of the borrower's engineer to submit all information and data required for the plans and specifications.

The attached "Check of Plans and Specifications for Telephone Construction," REA Form DS-T-62, provides a guide for the borrower's engineer in checking the plans and specifications for completeness before submitting them for approval. In exceptional cases, an REA Field Engineer may be assigned to review the plans and specifications in the field prior to their submission to REA for approval.

No attempt has been made in the attached form to outline all the considerations and design work entering into the preparation of plans and specifications. The purpose of the form is merely to assist in the preparation of a complete document. While reference is made only to the engineering memoranda and data directly pertaining to the preparation of plans and specifications, the engineer should comply with all other applicable memoranda and REA publications. The specific items enumerated in the REA Form DS-T-62 should not be construed to limit the duties and obligations of the engineer.

Having prepared the plans and specifications, the borrower's engineer will review and check all items in the first column of Form DS-T-62. References are given for each item - page numbers of the construction contract form as well as Engineering Memoranda. A careful study of

both should be made before the item is checked. The form is to be signed and dated by the borrower's engineer and included in the two copies of the Plans and Specifications submitted to REA for approval.

After review of the plans and specifications by REA the borrower's engineer will be notified of approval or of any suggested changes that should be made prior to the release for bids.

When notified of approval of the plans and specifications the borrower's engineer should send out the notice to bidders setting a bid date, satisfactory to the borrower, allowing sufficient time for contractors to prepare their bids. Bid dates should generally be set not less than four weeks from the issuance of the notice to bidders.

Additional copies of Form DS-T-62 may be obtained on request to the Engineering Division.

J. K. O'Shaughnessy

J. K. O'Shaughnessy
Chief, Engineering Division

Attachment: REA Form DS-T-62

Form DS-T-62
(1-52)

CHECK OF PLANS AND SPECIFICATIONS FOR TELEPHONE CONSTRUCTION

(Note: P. refers to page number of DS-T-10)

Project Designation_____

BORROWERS ENGINEER	REA FIELD ENGINEER *	SECTION ENGINEER'S OFFICE	
			I. Notice and Instructions to Bidders
___	___	___	1. P.(b)1. All blank spaces properly filled out
___	___	___	2. P.(b)1. Project miles and facilities do not exceed miles and facilities in approved loan and conform to total miles of line and facilities in Scope- P.(g)1-4.
___	___	___	3. P.(b)5. Signature of Owner or of Engineer for the Owner, and date.
___	___	___	4. P.(b)1. Bid date approved: Date_____
___	___	___	5. P.(b)4. Supplement A with list of materials furnished by borrower, if any.
			II. Contractor's Proposal
			A. Quantities; kind, size, type, capacity. (These must conform to Study prepared in accordance with Engineering Memorandum No. 517)
___	___	___	1. P.(c)1. All blank spaces filled out.
___	___	___	2. Poles (Manual and Telephone Engineering Memorandum No. 523). All data must be shown at top of P.(c)2.

* For use whenever plans and specifications are checked by the REA field engineer.

___ ___ ___ 3. P.(c)3, (c)4. Pole top assembly units.

___ ___ ___ 4. P.(c)5, (c)6. Conductor. Conforms to Resolution of Board on pre-selection and copy of Engineer's recommendation.

___ ___ ___ 5. P.(c)7. Guys and anchors.

___ ___ ___ 6. P.(c)8. Cable terminals.

___ ___ ___ 7. P.(c)9. Cable splicing units.

___ ___ ___ 8. P.(c)10. Section J-Buried cable; Section K - Drop wire.

___ ___ ___ 9. P.(c)11. Ground and Miscellaneous assembly units.

___ ___ ___ 10. P.(c)12. Section P - Protectors; Section R --Right-of-way.

___ ___ ___ 11. P.(c)13. Station Equipment.

___ ___ ___ 12. P.(c)14. Pin and insulator units.

___ ___ ___ 13. P.(c)15. Underground cable assembly units.

___ ___ ___ 14. P.(c)16. Central office equipment; underground conduit units; building units.

___ ___ ___ 15. P.(c)17. Joint use on electric power lines.

___ ___ ___ 16. P.(c)18 Removal units.

___ ___ ___ 17. P.(c)19. Rearrangement Units.

(II)B. Miscellaneous

___ ___ ___ 1. Section 13, P.(c)26. Completion period shown (Working days).

___ ___ ___ 2. P.(c)26. Statement made if conductors will be prestretched. See Manual.

___ ___ ___ 3. PP.(d)6 to (d)15. Descriptions included of any approved non-standard units.

___ ___ ___ 4. PP.(d)15-16. Description of special assembly units.

___ ___ ___ 5. P.(d)16. Description of removal assembly units.

___ ___ ___ 6. P.(d)16. List of "N" units.

III. Construction Agreement

--- --- --- 1. P.(e)2. Sequence of construction (approved by Owner)

--- --- --- 2. P.(e)12. Amount of liquidated damages.

IV. Material and Construction Specifications

--- --- --- 1. P.(g)1. Project designation shown.

--- --- --- 2. PP.(g)1 and (g)4. Scope of Project completely shown and conforms to approved loan or changes listed and described in supplemental data.

--- --- --- 3. P.(g)23. Commercial wood length of logs.

--- --- --- 4. P.(g)23. Method of disposal specified.

--- --- --- 5. PP.(h)1 to (h)5. Special approved drawings, if any.

--- --- --- 6. P.(h)6. List of Plans.

V. Studies

--- --- --- 1. Submitted by System Engineer to show basis for design. (Telephone Engineering Memorandum No. 517). (Construction summary complete; basic pole and ruling spans shown).

VI. Maps and Drawings

--- --- --- 1. Key, location of lines to be constructed.

--- --- --- 2. Key, location of lines which have not been staked.

--- --- --- 3. Key, location of lines for which easements have not been procured.

--- --- --- 4. Key, location of lines where right-of-way has been cleared. Number of miles cleared_____.

--- --- --- 5. Key, sequence of construction required by Owner.

--- --- --- 6. Detail maps.

--- --- --- 7. Town maps.

--- --- --- 8. Building structure drawings.

___ ___ ___ 9. Information, data and drawings required for permits, licenses, franchises, and authorizations from public bodies obtained.

___ ___ ___ 10. Permits, licenses, or agreements for river crossings, railroads, power lines, and telephone lines obtained.

VII. Design

___ ___ ___ 1. Conductor. (See Manual). Transmission satisfactory.

___ ___ ___ 2. Leading district (Engr. Memo. No. 1R2).
Light----------Medium_____Heavy_____

___ ___ ___ 3. Adequate protection (see Manual).

___ ___ ___ 4. Central Office requirements and specifications approved. (Name of Central Office and location shown on plans).

___ ___ ___ 5. Provides for future expansion.

___ ___ ___ 6. According to loan. Plans checked against loan maps, number and classification of subscribers to be served compared with number and classification of subscribers provided for in loan; deviations shown in supplemental data.

___ ___ ___ 7. Special PBX installations approved.

___ ___ ___ 8. Conformance with approved Area Coverage Design. (Deviations described and supported by supplement).

___ ___ ___ 9. Field inspection and investigation made by Borrowers Engineer.

VIII. Miscellaneous

___ ___ ___ 1. Copy of resolution of Board of Directors accepting Plans and Specifications.

___ ___ ___ 2. State Commission approvals, if required.

___ ___ ___ 3. Extent of staking completed, _____miles.

___ ___ ___ 4. Experience records of all engineers assigned to the Project on file with REA.

___ 5. Arrangements made for establishing an office at site of Project.

___ ___ ___ 6. Adequate funds available.
Loan funds_____.
Equity funds_____.

Remarks or notes:

_____

_____
Borrowers Engineer

_____Date

_____
REA Field Engineer

_____Date

_____
REA Section Engineer

_____Date